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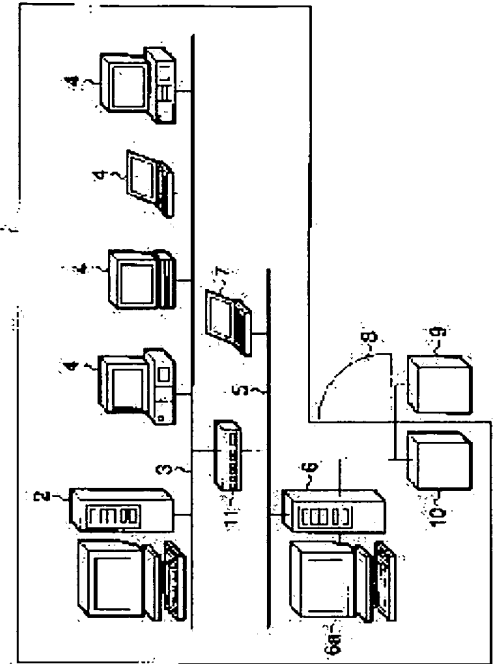
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(54) SYSTEM AND METHOD FOR MANAGING ELECTRONIC EQUIPMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an electronic equipment management system and an electronic equipment managing method, capable of preventing a person who is not allowed to enter the office from intruding and using electronic equipment, and improving security to a high level.

SOLUTION: When a plurality of computers 4 installed in an office 1, an entrance side controller 9 using an IC card, fingerprint matching, etc., makes a decision, while a condition that a user normally is in the office 1 where the computers 4 are installed is added to the condition of login, logging in to the computers 4 is allowed, only when the user normally in the office, and the logging in to the computers 4 is rejected, when the user has not entered the office 1 in the normal manner.



【特許請求の範囲】

【請求項 1】 部屋の中に設置され、この部屋に入室した利用者が利用する電子機器の利用を管理する電子機器管理システムであって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認する入室確認手段と、

前記部屋に入室した利用者が前記電子機器の操作を開始したことを検知し、前記入室確認手段の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断する判断手段と、

この判断手段により当該利用者が正常に入室していると判断された場合、当該電子機器の利用を許可し、当該利用者が正常に入室していないと判断された場合、当該電子機器の利用を拒否する制御手段と、

を具備したことを特徴とする電子機器管理システム。

【請求項 2】 部屋の中に設置され、この部屋に入室した利用者が利用する電子機器の利用を管理する電子機器管理システムであって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認する入室確認手段と、

前記電子機器において正当な利用者であるか否かを確認する個人確認手段と、この個人確認手段により正当な利用者であると確認された場合、前記入室確認手段の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断する判断手段と、

この判断手段により当該利用者が正常に入室していると判断された場合、当該電子機器の利用を許可し、当該利用者が正常に入室していないと判断された場合、当該電子機器の利用を拒否する制御手段と、

を具備したことを特徴とする電子機器管理システム。

【請求項 3】 前記電子機器は複数個存在することを特徴とする請求項 1 または請求項 2 記載の電子機器管理システム。

【請求項 4】 前記制御手段は、当該電子機器の利用を拒否した場合、その結果を記録するとともに報知することを特徴とする請求項 1 または請求項 2 記載の電子機器管理システム。

【請求項 5】 前記個人確認手段は前記入室確認手段とは異なる確認方法を用いることを特徴とする請求項 2 記載の電子機器管理システム。

【請求項 6】 部屋の中に設置され、この部屋に入室した利用者が利用するもので、それぞれがログイン管理機能を備えた複数のコンピュータの利用を管理する電子機器管理システムであって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認する入室確認手段と、

前記部屋に入室した利用者が前記コンピュータへのログインを開始したことを検知し、前記入室確認手段の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断する判断手段と、

この判断手段により当該利用者が正常に入室していると判断された場合、当該コンピュータへのログインを許可し、当該利用者が正常に入室していないと判断された場合、当該コンピュータへのログインを拒否する制御手段と、

を具備したことを特徴とする電子機器管理システム。

【請求項 7】 部屋の中に設置され、この部屋に入室した利用者が利用するもので、それぞれがログイン管理機能を備えた複数のコンピュータの利用を管理する電子機器管理システムであって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認する入室確認手段と、

前記複数のコンピュータにおいて、それぞれ正当な利用者であるか否かを確認する個人確認手段と、

この個人確認手段により正当な利用者であると確認された場合、前記入室確認手段の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断する判断手段と、

この判断手段により当該利用者が正常に入室していると判断された場合、当該コンピュータへのログインを許可し、当該利用者が正常に入室していないと判断された場合、当該コンピュータへのログインを拒否する制御手段と、

を具備したことを特徴とする電子機器管理システム。

【請求項 8】 部屋の中に設置され、この部屋に入室した利用者が利用する電子機器の利用を管理する電子機器管理方法であって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認するステップと、

前記部屋に入室した利用者が前記電子機器の操作を開始したことを検知し、前記入室の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断するステップと、

この判断により当該利用者が正常に入室していると判断された場合、当該電子機器の利用を許可し、当該利用者が正常に入室していないと判断された場合、当該電子機器の利用を拒否するステップと、

を具備したことを特徴とする電子機器管理方法。

【請求項 9】 部屋の中に設置され、この部屋に入室した利用者が利用する電子機器の利用を管理する電子機器管理方法であって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認するステップと、

前記電子機器において正当な利用者であるか否かを確認するステップと、

この確認により正当な利用者であると確認された場合、前記入室の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断するステップと、この判断により当該利用者が正常に入室していると判断された場合、当該電子機器の利用を許可し、当該利用者

が正常に入室していないと判断された場合、当該電子機器の利用を拒否するステップと、
を具備したことを特徴とする電子機器管理方法。

【請求項10】 部屋の中に設置され、この部屋に入室した利用者が利用するもので、それぞれがログイン管理機能を備えた複数のコンピュータの利用を管理する電子機器管理方法であって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認するステップと、

前記部屋に入室した利用者が前記コンピュータへのログインを開始したことを検知し、前記入室の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断するステップと、

この判断により当該利用者が正常に入室していると判断された場合、当該コンピュータへのログインを許可し、当該利用者が正常に入室していないと判断された場合、当該コンピュータへのログインを拒否するステップと、
を具備したことを特徴とする電子機器管理方法。

【請求項11】 部屋の中に設置され、この部屋に入室した利用者が利用するもので、それぞれがログイン管理機能を備えた複数のコンピュータの利用を管理する電子機器管理方法であって、

前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認するステップと、

前記複数のコンピュータにおいて、それぞれ正当な利用者であるか否かを判断するステップと、

この確認により正当な利用者であると確認された場合、前記入室の確認結果を参照することにより、当該利用者が正常に入室しているか否かを判断するステップと、
この判断により当該利用者が正常に入室していると判断された場合、当該コンピュータへのログインを許可し、当該利用者が正常に入室していないと判断された場合、当該コンピュータへのログインを拒否するステップと、
を具備したことを特徴とする電子機器管理方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は、たとえば、部屋の中に設置された複数のコンピュータや計測機器、医療機器などの電子機器の利用を管理する電子機器管理システムおよび電子機器管理方法に関する。

【0002】

【従来の技術】通常のオフィスでは、コンピュータを利用する際に、当該コンピュータで動作するログイン管理プロセス（プログラム）が、画面から入力されたログイン名とパスワードをログイン管理サーバに送り、ログイン管理サーバ（例として、ウインドウズ（登録商標）ネットワークではドメインサーバ）内で管理されたデータと、それが一致したことをサーバから受けた後に、ログイン管理プロセスがコンピュータおよび指定された機器へのアクセスを許可するという形が一般的である。

【0003】この方法であると、常にログイン名とパスワードを第三者に盗まれ、不正に利用される可能性がある。また、ログインを許可する条件の対象装置も、コンピュータ名やネットワークアドレスなどの論理的データを基に行なわれている。

【0004】一方、不正利用を防ぐために、本人確認の手段として、IDカードの所持、生体機能の認証（たとえば、指紋など）を用いる方法があるが、コンピュータごとにIDカードの読取装置や、生体照合装置を付加する必要があり、コンピュータの設置台数が多くなるとコストの面で負担が多く、それほど普及していないのが実情である。

【0005】また、単なる入退室システムで、コンピュータールームへのアクセスを制御することにより、不正なアクセスは不可能であるが、一般のドアではアクセス権のある人とともに入退室できてしまうために、完全なアクセス制御にならないのが実情である。特別に用意されたドアおよびドア制御を用いれば、このような現象をある程度防止できるが、通行に時間がかかるため、ごく一部の採用にとどまっている。

【0006】

【発明が解決しようとする課題】コンピュータへのアクセスに関して、個人認証をパスワードと暗証番号とで行なう場合は、入退室をセキュリティ機器で制御していても、入室資格のない人間による侵入および同人によるコンピュータアクセスの問題が残る。また、入退室制御のない場所でのフリーな入退室と個人認証機器（指紋照合やIDカード）の組み合わせでも、不正入場者の脅威に常にさらされている状態になる。

【0007】特に、従来のログイン管理では、論理的なデータでしか相手を特定できず、物理的な制約をかけられず、他者からのハッキングの可能性に常にさらされている。

【0008】さらに、コンピュータへのログイン時に、単独の方法で本人確認を行なっている場合、なんらかの手段でその壁を突破してしまった場合、それ以後にチェックがかからず、自由にアクセスを許してしまうことになる。

【0009】そこで、本発明は、入室許可のない人の侵入による電子機器の利用を排除することができ、セキュリティを著しく向上させることができる電子機器管理システムおよび電子機器管理方法を提供することを目的とする。

【0010】

【課題を解決するための手段】本発明の電子機器管理システムは、部屋の中に設置され、この部屋に入室した利用者が利用する電子機器の利用を管理する電子機器管理システムであって、前記部屋の入口において前記利用者が当該部屋に正常に入室したことを確認する入室確認手段と、前記部屋に入室した利用者が前記電子機器の操作

を判断するステップと、この判断により当該利用者が正常に入室していると判断された場合、当該コンピュータへのログインを許可し、当該利用者が正常に入室していないと判断された場合、当該コンピュータへのログインを拒否するステップとを具備している。

【0018】本発明によれば、たとえば、コンピュータへのログイン時、ログインの条件に、IDカードや指紋照合などを用いた入室確認手段による、利用者が正常に当該コンピュータの設置された部屋に入室しているという条件を加えて判断し、正常に入室している場合にだけログインを許可し、正常に入室していない場合にはログインを拒否することにより、入室許可のない人の侵入によるコンピュータへのログインを排除することができ、セキュリティを著しく向上させることができるものである。

【0019】

【発明の実施の形態】以下、本発明の実施の形態について図面を参照して説明する。

【0020】まず、第1の実施の形態について説明する。

【0021】図1は、第1の実施の形態に係る電子機器管理システムの構成を示すものである。図1は、たとえば、通常のオフィス環境を想定しており、オフィス（部屋）1内には、ログイン管理サーバ2とネットワーク3を介して接続された複数のクライアント（一般用）コンピュータ4、…が設置されている。なお、各コンピュータ4は、ログイン管理機能（ログイン管理プロセス）を備えているものとする。

【0022】また、入退室管理システムとして、ネットワーク5を介して接続された入退室管理サーバ6とデータ登録用の入退室登録装置（端末コンピュータ）7が設置されているとともに、オフィス1の出入口8に設置され、入退室の許可／不許可と電気錠の制御を行なう入退室制御装置としての入室側制御装置9および退室側制御装置10が設けられている。ネットワーク3およびネットワーク5は、ハブ11を介して接続され、相互で通信可能となっている。

【0023】なお、入退室制御装置は、一般的には無線式IDカードや磁気カードなどのIDカードを用いる場合や、指紋照合などの身体特徴を用いる場合などがあるが、ここではそのどちらかは特定せず、いずれを用いてもよい。

【0024】これらの2つのシステム（入退室管理とログイン管理）は独立して存在する場合が一般的であるが、このような状況下では入退室管理をすり抜けて入室してしまった人の、一般用コンピュータへのアクセス防止は、ログイン名と暗証番号のみとなってしまう。

【0025】本実施の形態では、これら2つのシステムのサーバをネットワークを介して相互に接続し（図1におけるハブ11がそれに相当）、さらに、ログインのた

めの条件として、入退室管理での正常入室（当該部屋への）を付加することを特徴としている。

【0026】次に、基本的なログイン時の動作について、図2に示すフローチャートを参照しつつ説明する。

【0027】まず、あらかじめ、この部屋（オフィス1）に入室可能な人物（利用者）の登録を、入退室登録装置7から入退室管理サーバ6を経由して、入室側制御装置9および退室側制御装置10にそれぞれ行なう。登録されるのは、たとえば、IDカードの場合であればID番号、指紋照合の場合は本人の指紋照合用データである。

【0028】さて、いま入室を許可されたAさんがオフィス1に入室したとする。その入室許可の判定結果は、入室側制御装置9から入退室管理サーバ6に送られ、Aさんはオフィス1に正常入室状態と記憶される。この後、Aさんはオフィス1内の所定のコンピュータ4からログイン名を入力し、ログインを行なおうとすると、コンピュータ4内のログイン管理プロセス（プログラム）は、それを検知することにより、直接ログイン管理サーバ2に認証にいくのではなく、入退室管理サーバ6内に当該ログイン名を持つ人が、自身のコンピュータのある部屋（ここではオフィス1）に正常入室状態であるかを確認に行く。

【0029】具体的には、入退室管理サーバ6内には、Aさんのログイン名があらかじめAさんに対応付けられて登録されているため、そのログイン名からAさんを検索し、Aさんの入退室状態を検索する。なお、コンピュータ4内には、あらかじめ、どの部屋に設置されているのかの情報を記憶させておくか、コンピュータ名に設置場所名を付加しておくこととする。この情報から、ログイン管理プロセスは、コンピュータ4が設置されているオフィス1に正常入室状態であれば、次のステップとしてログイン管理サーバ2に対してログイン処理を依頼する。ここでは、ログイン名とパスワード（暗証番号）が確認され、その内容が正しければ正常にログインが許可される。

【0030】Aさんが作業を終え、ログアウトを行なうと、ログイン管理プロセスは、それを検知することにより、ログイン管理サーバ2に対してログアウト処理を依頼する。次に、Aさんが退室すると、退室側制御装置10から退室情報が入退室管理サーバ6へ送られ、Aさんの状態は退室状態になる。

【0031】ここで、たとえば、不正に入室した別人がAさんのログイン名とパスワードを入手し、ログインを試みると、上記したように、ログイン管理プロセスは、最初に入退室管理サーバ6にAさんの入退室状態を確認に行くが、この場合、Aさんは退室状態にあるため、次のログイン管理サーバ2への処理に行かず、ログインできないこととなる。すなわち、コンピュータ4へのログインを拒否するものである。

【0032】このような不正ログインの試みが行なわれると、ログイン管理プロセスは、その旨を入退室管理サーバ6へ通知し、入退室管理サーバ6内に記録として残すとともに、入退室管理サーバ6のディスプレイ6aで警報表示し、警告を促す。

【0033】次に、第2の実施の形態について説明する。

【0034】前述した第1の実施の形態では、入退室管理サーバ6への入退室状態の確認をコンピュータ4内のログイン管理プロセスが行なったが、第2の実施の形態は、入退室管理サーバ6への入退室状態の確認をログイン管理サーバ2内のログイン管理プロセスが行なうようにしたものであり、その動作の流れを図3のフローチャートに示す。この場合、コンピュータ4のログイン管理プロセスの動きは全く変えることなく、ログインの依頼を受けたログイン管理サーバ2内のログイン管理プロセスが、ログイン許可の条件として、一般的である登録されたログイン名とパスワード、コンピュータ名に加えて、ログイン名から判断される利用者の入退室状態が正常入室状態になっていることを確認することで実現されるもので、その他は第1の実施の形態と同様である。

【0035】次に、第3の実施の形態について説明する。

【0036】図4は、第3の実施の形態に係る電子機器管理システムの構成を示すものである。第3の実施の形態の前述した第1の実施の形態と異なる点は、オフィス1の出入口8のみではなく、各コンピュータ4にも、それぞれ正当な利用者であるか否かを確認する個人確認装置（IDカードであればIDカードリーダを用いたもの、指紋であれば指紋照合装置を用いたもの）12を設置した点にあり、その他は第1の実施の形態と同様である。この場合、出入口8に設置された入退室制御装置9、10と異なる確認方法の組合わせが、より高いセキュリティを確保する意味では有効である。たとえば、出入口8の入退室制御装置はIDカードによる確認方法を用い、コンピュータ4ごとの個人確認装置12は指紋照合による確認方法を用いる。

【0037】この第3の実施の形態の場合の動作の流れを図5のフローチャートに示す。この場合、コンピュータ4側のログイン管理プロセスは、個人確認装置12を使用して、本人自身がアクセスしているかを確認後、個人確認装置12から読取られた個人を特定する情報（たとえば、IDカードであればID番号、指紋照合であれば指紋情報と1対1に意味付けられたID番号）をログイン名として、入退室管理サーバ6に入室状態を問い合わせ、正常入室状態にあった場合だけ、ログイン管理サーバ2に対してログイン処理を依頼する。

【0038】なお、個人確認装置12で用いるパスワード（暗証番号）は、キーボードからの入力を使用するか、または、指紋照合の場合は指紋情報の一部または全

部を使用してもよい。

【0039】このように、コンピュータ4側のログイン管理プロセスに処理を追加した場合は、既存のログイン管理サーバ2のプログラムに手を加える必要がなく、簡単にシステムを強化できる利点がある。また、入退室状態を確認することにより、入室許可のない部屋からのコンピュータアクセスが禁止できるため、アクセスをする場所といった物理的な制限を加えることが可能となる。

【0040】さらに、この場合、何らかの方法で個人確認装置12が不正な手段によって突破された場合でも、入退室管理側のデータを更にチェックすることにより、不正なログインを未然に防止することができる。

【0041】以上説明したように、上記実施の形態によれば、オフィス1内に設置された複数のコンピュータ4へのログイン時、ログインの条件に、IDカードや指紋照合などを用いた入室側制御装置9による、利用者が正常に当該コンピュータ4の設置されたオフィス1内に入室しているという条件を加えて判断し、正常に入室している場合にだけログインを許可し、正常に入室していない場合にはログインを拒否することにより、入室許可のない人の侵入によるコンピュータ4へのログインを排除することが可能となる。また、物理的な場所を特定してコンピュータ4からのログインの制限が可能となる。また、各コンピュータ4に個人確認用機器がない場合でも、上記作用効果を安価に実現できる。さらに、2つ以上の個人識別を組み合わせることにより、不正なアクセス防止の効果をより高めるといった効果がある。

【0042】なお、前記実施の形態では、オフィス内に設置された複数のコンピュータの利用を管理する場合について説明したが、本発明はこれに限定されるものではなく、たとえば、計測機器や医療機器など、他の電子機器の利用を管理する場合にも同様に適用できる。

【0043】

【発明の効果】以上詳述したように本発明によれば、入室許可のない人の侵入による電子機器の利用を排除することができ、セキュリティを著しく向上させることができる電子機器管理システムおよび電子機器管理方法を提供できる。

【図面の簡単な説明】

【図1】本発明の第1の実施の形態に係る電子機器管理システムの構成を模式的に示す構成図。

【図2】第1の実施の形態に係る基本的なログイン時の動作について説明するフローチャート。

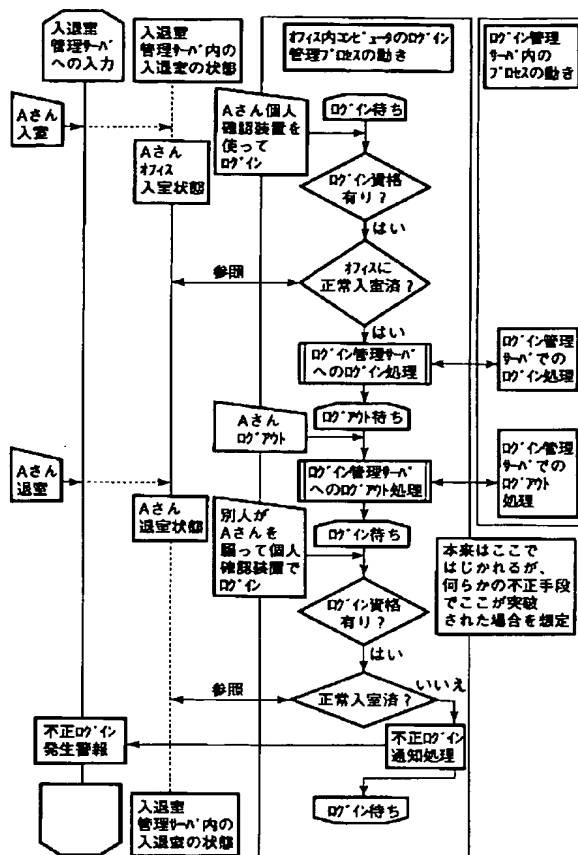
【図3】第2の実施の形態に係る基本的なログイン時の動作について説明するフローチャート。

【図4】本発明の第3の実施の形態に係る電子機器管理システムの構成を模式的に示す構成図。

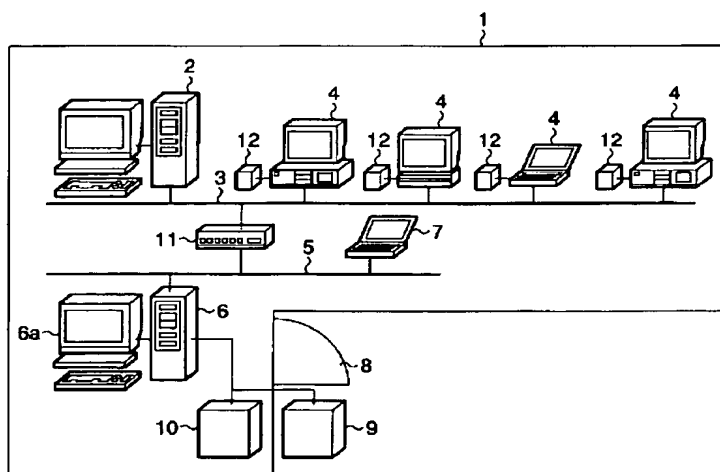
【図5】第3の実施の形態に係る基本的なログイン時の動作について説明するフローチャート。

【符号の説明】

【図 5】



【図 4】



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CLAIMS

[Claim(s)]

[Claim 1]An electronic equipment managerial system which manages use of electronic equipment which a user who was installed into a room characterized by comprising the following, and entered this room uses.
An entrance verifying means which checks that said user has entered the room concerned normally at an entrance of said room.

When a user who entered said room detects having started operation of said electronic equipment and refers to an identification result of said entrance verifying means, A control means which refuses use of the electronic equipment concerned when it is judged that use of the electronic equipment concerned is permitted and the user concerned has not entered a room normally when the user concerned is judged that the user concerned has entered a room normally by decision means which judges whether a room is entered normally, and this decision means.

[Claim 2]An electronic equipment managerial system which manages use of electronic equipment which a user who was installed into a room characterized by comprising the following, and entered this room uses.
An entrance verifying means which checks that said user has entered the room concerned normally at an entrance of said room.

An individual confirmation means to check whether you are a just user in said electronic equipment.

A decision means which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance verifying means when it is checked by this individual confirmation means that he is a just user.

A control means which refuses use of the electronic equipment concerned when it is judged that use of the electronic equipment concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this decision means.

[Claim 3]The electronic equipment managerial system according to claim 1 or 2, wherein two or more said electronic equipment exists.

[Claim 4]The electronic equipment managerial system according to claim 1 or 2 reporting said control means while it records the result when use of the electronic equipment concerned is refused.

[Claim 5]The electronic equipment managerial system according to claim 2, wherein said individual confirmation means uses different check methods from said entrance verifying means.

[Claim 6]An electronic equipment managerial system which manages use of two or more computers by which it was installed into a room characterized by comprising the following, a user who entered this room uses, and each was provided with a login controlling function.

An entrance verifying means which checks that said user has entered the room concerned normally at an entrance of said room.

When a user who entered said room detects having started login to said computer and refers to an identification result of said entrance verifying means, When it is judged that the user concerned has entered a room normally by decision means which judges whether the user concerned has entered a room normally, and this decision means, A control means which refuses login to the computer concerned when login to the computer concerned is permitted and the user concerned is judged to have not entered a room normally.

[Claim 7]An electronic equipment managerial system which manages use of two or more computers by which it was installed into a room characterized by comprising the following, a user who entered this room uses, and each was provided with a login controlling function.

An entrance verifying means which checks that said user has entered the room concerned normally at an

entrance of said room.

An individual confirmation means to check whether you are a respectively just user in said two or more computers.

A decision means which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance verifying means when it is checked by this individual confirmation means that he is a just user.

A control means which refuses login to the computer concerned when it is judged that login to the computer concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this decision means.

[Claim 8]An electronic equipment controlling method which manages use of electronic equipment which a user who was installed into a room characterized by comprising the following, and entered this room uses.

A step which checks that said user has entered the room concerned normally at an entrance of said room.

When a user who entered said room detects having started operation of said electronic equipment and refers to an identification result of said entrance into a room, A step which refuses use of the electronic equipment concerned when it is judged that use of the electronic equipment concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this judgment, a step which judges whether the user concerned has entered a room normally, and.

[Claim 9]An electronic equipment controlling method which manages use of electronic equipment which a user who was installed into a room characterized by comprising the following, and entered this room uses.

A step which checks that said user has entered the room concerned normally at an entrance of said room.

A step which checks whether you are a just user in said electronic equipment.

A step which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance into a room when it is checked by this check that he is a just user.

A step which refuses use of the electronic equipment concerned when it is judged that use of the electronic equipment concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this judgment.

[Claim 10]An electronic equipment controlling method which manages use of two or more computers by which it was installed into a room characterized by comprising the following, a user who entered this room uses, and each was provided with a login controlling function.

A step which checks that said user has entered the room concerned normally at an entrance of said room.

When a user who entered said room detects having started login to said computer and refers to an identification result of said entrance into a room, A step which judges whether the user concerned has entered a room normally, and when it is judged that the user concerned has entered a room normally by this judgment, A step which refuses login to the computer concerned when login to the computer concerned is permitted and the user concerned is judged to have not entered a room normally.

[Claim 11]An electronic equipment controlling method which manages use of two or more computers by which it was installed into a room characterized by comprising the following, a user who entered this room uses, and each was provided with a login controlling function.

A step which checks that said user has entered the room concerned normally at an entrance of said room.

A step which checks whether you are a respectively just user in said two or more computers.

A step which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance into a room when it is checked by this check that he is a just user.

A step which refuses login to the computer concerned when it is judged that login to the computer concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this judgment.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the electronic equipment managerial system and electronic equipment controlling method which manage use of electronic equipment, such as two or more computers and measuring machine machines, medical equipment, etc. which were installed into the room, for example.

[0002]

[Description of the Prior Art]In the usual office, when using a computer, the login managing process (program) which operates by computer concerned, From a screen, the login name and password which were entered are sent to a login managing server, and it is a login managing server (as an example). After receiving from a server being [which was managed within the domain server in the Windows (registered trademark) network] data, and that it was in agreement, the form where a login managing process permits access to a computer and the specified apparatus is common.

[0003]A login name and a password may always be stolen by the third party as it is this method, and it may be used unjustly. The object device of conditions which permits login is also performed based on the logical data of a computer name, a network address, etc.

[0004]On the other hand, in order to prevent an illegal use, there is a method of using possession of an ID card and attestation (for example, fingerprint etc.) of a vital function as a means of personal identification, but. When it is necessary to add the reader and living body collating unit of an ID card for every computer and the number of install stands of a computer increases, there are many burdens in respect of cost, and the actual condition has not spread so much.

[0005]Although unjust access is impossible by controlling access to a computer room by a mere ON leaving system, since ON leaving can be carried out with people with an access right, at a general door, the actual condition does not become perfect access control. If the door and door control which were prepared specially are used, such a phenomenon can be prevented to some extent, but since passing takes time, it remains in a part of adoption very much.

[0006]

[Problem(s) to be Solved by the Invention]When performing personal authentication by the password and a password about access to a computer, even if it is controlling ON leaving by security equipments, the problem of the invasion by human being without entrance qualification and computer access by a member remains. It will be in the state where it is always exposed to an inaccurate visitor's threat, also in free ON leaving at a place and the combination of personal authentication apparatus (fingerprint authentication and ID card) without ON leaving control.

[0007]In particular, in the conventional login management, specific [of the partner] can be carried out only by logical data, and physical restrictions cannot be applied, but it is always exposed to the possibility of hacking from the others.

[0008]When personal identification is being performed by the independent method at the time of login to a computer and it has broken through the wall by a certain means, a check will not start after it but access will be allowed freely.

[0009]Then, this invention can eliminate use of the electronic equipment by invasion of people without entrance permission, and an object of this invention is to provide the electronic equipment managerial system and electronic equipment controlling method which can raise security remarkably.

[0010]

[Means for Solving the Problem]An electronic equipment managerial system of this invention is provided with the following.

An entrance verifying means in which it is an electronic equipment managerial system which manages use of electronic equipment which a user who was installed into a room and entered this room uses, and said user checks having entered the room concerned normally at an entrance of said room.

A decision means which judges whether the user concerned has entered a room normally when a user who entered said room detects having started operation of said electronic equipment and refers to an identification result of said entrance verifying means.

A control means which refuses use of the electronic equipment concerned when it is judged that use of the electronic equipment concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this decision means.

[0011]An electronic equipment managerial system of this invention is provided with the following.

An entrance verifying means in which it is an electronic equipment managerial system which manages use of electronic equipment which a user who was installed into a room and entered this room uses, and said user checks having entered the room concerned normally at an entrance of said room.

An individual confirmation means to check whether you are a just user in said electronic equipment.

A decision means which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance verifying means when it is checked by this individual confirmation means that he is a just user.

A control means which refuses use of the electronic equipment concerned when it is judged that use of the electronic equipment concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this decision means.

[0012]An electronic equipment managerial system of this invention is provided with the following.

An entrance verifying means in which it is an electronic equipment managerial system which manages use of two or more computers by which it was installed into a room, a user who entered this room uses, and each was provided with a login controlling function, and said user checks having entered the room concerned normally at an entrance of said room.

A decision means which judges whether the user concerned has entered a room normally when a user who entered said room detects having started login to said computer and refers to an identification result of said entrance verifying means.

A control means which refuses login to the computer concerned when it is judged that login to the computer concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this decision means.

[0013]An electronic equipment managerial system of this invention is provided with the following.

An entrance verifying means in which it is an electronic equipment managerial system which manages use of two or more computers by which it was installed into a room, a user who entered this room uses, and each was provided with a login controlling function, and said user checks having entered the room concerned normally at an entrance of said room.

An individual confirmation means to check whether you are a respectively just user in said two or more computers.

A decision means which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance verifying means when it is checked by this individual confirmation means that he is a just user.

A control means which refuses login to the computer concerned when it is judged that login to the computer concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this decision means.

[0014]An electronic equipment controlling method of this invention is provided with the following.

A step to which it is an electronic equipment controlling method which manages use of electronic equipment which a user who was installed into a room and entered this room uses, and said user checks having entered the room concerned normally at an entrance of said room.

A step which judges whether the user concerned has entered a room normally when a user who entered said room detects having started operation of said electronic equipment and refers to an identification result of said entrance into a room.

A step which refuses use of the electronic equipment concerned when it is judged that use of the electronic

equipment concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this judgment.

[0015]An electronic equipment controlling method of this invention is provided with the following.

A step to which it is an electronic equipment controlling method which manages use of electronic equipment which a user who was installed into a room and entered this room uses, and said user checks having entered the room concerned normally at an entrance of said room.

A step which checks whether you are a just user in said electronic equipment.

A step which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance into a room when it is checked by this check that he is a just user.

A step which refuses use of the electronic equipment concerned when it is judged that use of the electronic equipment concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this judgment.

[0016]An electronic equipment controlling method of this invention is provided with the following.

A step to which it is an electronic equipment controlling method which manages use of two or more computers by which it was installed into a room, a user who entered this room uses, and each was provided with a login controlling function, and said user checks having entered the room concerned normally at an entrance of said room.

A step which judges whether the user concerned has entered a room normally when a user who entered said room detects having started login to said computer and refers to an identification result of said entrance into a room.

A step which refuses login to the computer concerned when it is judged that login to the computer concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this judgment.

[0017]An electronic equipment controlling method of this invention is provided with the following.

A step to which it is an electronic equipment controlling method which manages use of two or more computers by which it was installed into a room, a user who entered this room uses, and each was provided with a login controlling function, and said user checks having entered the room concerned normally at an entrance of said room.

A step which checks whether you are a respectively just user in said two or more computers.

A step which judges whether the user concerned has entered a room normally by referring to an identification result of said entrance into a room when it is checked by this check that he is a just user.

A step which refuses login to the computer concerned when it is judged that login to the computer concerned is permitted and the user concerned has not entered a room normally when it is judged that the user concerned has entered a room normally by this judgment.

[0018]According to this invention, at the time of login to a computer, for example on conditions of login.

Conditions by an entrance verifying means using an ID card, fingerprint authentication, etc. that a user has entered a room in which the computer concerned was installed normally are added and judged, By permitting login, only when having entered a room normally, and refusing login, when not having entered a room normally, login to a computer by invasion of people without entrance permission can be eliminated, and security can be raised remarkably.

[0019]

[Embodiment of the Invention]Hereafter, an embodiment of the invention is described with reference to drawings.

[0020]First, a 1st embodiment is described.

[0021]Drawing 1 shows the composition of the electronic equipment managerial system concerning a 1st embodiment. Drawing 1 assumes the usual office environment, for example, and two or more client (for general) computers 4 connected with the login managing server 2 via the network 3 and -- are installed in the office (room) 1. Each computer 4 assumes that it has the login controlling function (login managing process).

[0022]While the ON leaving managing server 6 and the ON leaving registration device 7 for data registration (terminal computer) which were connected via the network 5 as an ON leaving managerial system are installed, It is installed in the entrance 8 of the office 1, and the entrance side control device 9 and the leaving side control device 10 as an ON leaving control device which perform control of permission/disapproval of ON leaving, and an

electric lock are formed. It is connected via the hub 11 and the network 3 and the network 5 can communicate by mutual.

[0023]Although physical features, such as a case where ID cards, such as a radio type ID card and a magnetic card, are used, and fingerprint authentication, may generally be used for an ON leaving control device, the either may not specify but may use any here.

[0024]Although these two systems (ON leaving management and login management) have a common case where it exists independently, under such a situation, the prevention from access to the computer for general of those who passed through ON leaving management and have entered a room will be only a login name and a password.

[0025]According to this embodiment, the server of these two systems is mutually connected via a network (the hub 11 in drawing 1 is equivalent to it), and it is further characterized by adding the normal entrance into a room (to the room concerned) by ON leaving management as conditions for login.

[0026]Next, it explains, referring to for the operation at the time of fundamental login the flow chart shown in drawing 2.

[0027]First, registration of the person (user) who can enter this room (office 1) is beforehand performed to the entrance side control device 9 and the leaving side control device 10 via the ON leaving managing server 6 from the ON leaving registration device 7, respectively. If registered for example, in the case of an ID card, in the case of an ID number and fingerprint authentication, it will be data for fingerprint authentication of the person himself/herself.

[0028]Now, suppose that Mr. A permitted entrance into a room now entered the office 1. The decision result of the entrance permission is sent to the ON leaving managing server 6 from the entrance side control device 9, and Mr. A is remembered to be a normal entrance-into-a-room state in the office 1. Then, when it tries to log in by Mr. A inputting a login name from the predetermined computer 4 in the office 1, the login managing process (program) in the computer 4, By detecting it, it does not go to the login managing server 2 to attest directly, but those who have the login name concerned in the ON leaving managing server 6 go [whether it is in a normal entrance-into-a-room state, and] to the room (here office 1) with an own computer to check.

[0029]Since Mr. A's login name is beforehand matched with Mr. A and is registered into the ON leaving managing server 6, Mr. A is searched from the login name, and, specifically, Mr. A's ON leaving condition is searched. Suppose that the information on in which room it is installed is made to memorize beforehand, or a setting position name is added to a computer name into the computer 4. From this information, if a login managing process is in a normal entrance-into-a-room state, it will request login processing from the office 1 in which the computer 4 is installed to the login managing server 2 as a following step. Here, a login name and a password (password) are checked, and if the contents are right, login will be permitted normally.

[0030]If Mr. A logs out by finishing work, a login managing process will request logout processing to the login managing server 2 by detecting it. Next, if Mr. A leaves a room, leaving information is sent to the ON leaving managing server 6 from the leaving side control device 10, and Mr. A's condition will be in a leaving state.

[0031]If the another person who entered a room unjustly here, for example obtains Mr. A's login name and password and tries login, as described above, a login managing process will go Mr. A's ON leaving condition to the ON leaving managing server 6 to check first, but. In this case, since Mr. A is in a leaving state, he can go and log in to the processing to the following login managing server 2. That is, login to the computer 4 is refused.

[0032]If the trial of such unjust login is performed, the warning display of it will be carried out on the display 6a of the ON leaving managing server 6, and warning will be urged to it while a login managing process notifies that to the ON leaving managing server 6 and leaves it as record in the ON leaving managing server 6.

[0033]Next, a 2nd embodiment is described.

[0034]Although the login managing process in the computer 4 checked the ON leaving state to the ON leaving managing server 6 in a 1st embodiment mentioned above, The login managing process in the login managing server 2 is made to check the ON leaving state to the ON leaving managing server 6, and a 2nd embodiment shows the flow of the operation to the flow chart of drawing 3. In this case, the login managing process in the login managing server 2 which received the request of login a motion of the login managing process of the computer 4 as conditions for login permission, without completely changing, It realizes by checking that a user's ON leaving condition judged from a login name is in a normal entrance-into-a-room state in addition to the registered general login name, and a password and a computer name, and others are the same as that of a 1st embodiment.

[0035]Next, a 3rd embodiment is described.

[0036]Drawing 4 shows the composition of the electronic equipment managerial system concerning a 3rd embodiment. A different point from a 1st embodiment that a 3rd embodiment mentioned above, the individual confirmation device (the thing using the ID card reader when it was an ID card.) which checks whether you are a

respectively just user not only to the entrance 8 of the office 1 but to each computer 4. If it is a fingerprint, it is in the point of having installed the thing 12 using a fingerprint collation device, and others are the same as that of a 1st embodiment. In this case, the combination of the different check method from the ON leaving control devices 9 and 10 installed in the entrance 8 is effective in the meaning which secures higher security. For example, the ON leaving control device of the entrance 8 uses the check method according [the individual confirmation device 12 for every computer 4] to fingerprint authentication using the check method by an ID card.

[0037]The flow of operation in the case of this 3rd embodiment is shown in the flow chart of drawing 5. In this case, the login managing process by the side of the computer 4, After checking whether the person himself/herself itself has accessed by using the individual confirmation device 12, The information (for example, ID number the significance [ID number] was given by fingerprint information and 1 to 1 when it was an ID card and was an ID number and fingerprint authentication) which specifies the individual read in the individual confirmation device 12 is made into a login name, Only when an entrance state is asked to the ON leaving managing server 6 and a normal entrance-into-a-room state is suited, login processing is requested to the login managing server 2.

[0038]In the case of fingerprint authentication, a part or all of fingerprint information may be used for the password (password) used with the individual confirmation device 12, using the input from a keyboard.

[0039]Thus, when processing is added to the login managing process by the side of the computer 4, it is not necessary to modify the program of the existing login managing server 2, and there is an advantage which can strengthen a system simple. Since computer access from the room which does not have entrance permission by checking an ON leaving state can be forbidden, it becomes possible to add the physical restriction of the place to access.

[0040]Even when it breaks through the individual confirmation device 12 by an inaccurate means by a certain method in this case, unjust login can be beforehand prevented by checking further the data by the side of ON leaving management.

[0041]At the time of login to two or more computers 4 which were installed in the office 1 according to the above-mentioned embodiment as explained above. . Are based on the entrance side control device 9 which used an ID card, fingerprint authentication, etc. for the conditions of login. By a user adding and judging the conditions of having entered a room in the office 1 in which the computer 4 concerned was installed normally, permitting login, only when having entered a room normally, and refusing login, when not having entered a room normally, It becomes possible to eliminate login to the computer 4 by invasion of people without entrance permission. A physical place is pinpointed and restriction of login from the computer 4 is attained. Even when there is no apparatus for individual confirmation in each computer 4, the above-mentioned operation effect can be realized cheaply. It is effective in heightening the effect of the unjust prevention from access more by combining two or more identification.

[0042]Although said embodiment explained the case where use of two or more computers installed in the office was managed, this invention is not limited to this, and when managing use of other electronic equipment, such as a measuring machine machine and medical equipment, it can be applied similarly, for example.

[0043]

[Effect of the Invention]As explained in full detail above, according to this invention, use of the electronic equipment by invasion of people without entrance permission can be eliminated, and the electronic equipment managerial system and electronic equipment controlling method which can raise security remarkably can be provided.

[Translation done.]

*** NOTICES ***

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- 3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]The lineblock diagram showing typically the composition of the electronic equipment managerial system concerning a 1st embodiment of this invention.

[Drawing 2]The flow chart explaining the operation at the time of fundamental login concerning a 1st embodiment.

[Drawing 3]The flow chart explaining the operation at the time of fundamental login concerning a 2nd embodiment.

[Drawing 4]The lineblock diagram showing typically the composition of the electronic equipment managerial system concerning a 3rd embodiment of this invention.

[Drawing 5]The flow chart explaining the operation at the time of fundamental login concerning a 3rd embodiment.

[Description of Notations]

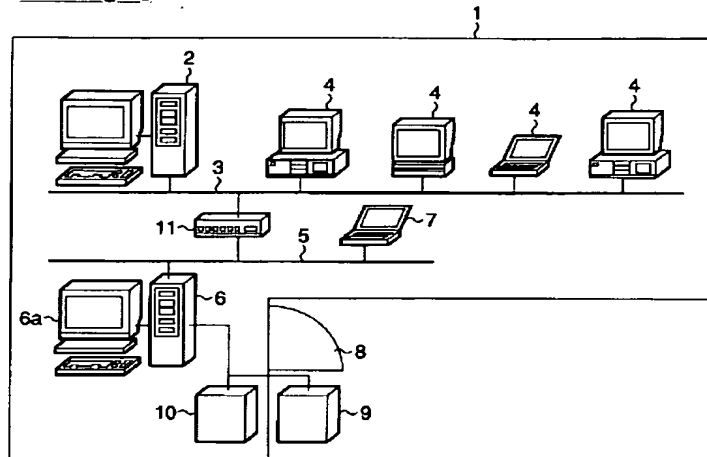
- 1 --- Office (room)
- 2 --- Login managing server
- 4 --- Computer (electronic equipment)
- 6 --- ON leaving managing server
- 7 --- ON leaving registration device
- 8 --- Entrance
- 9 --- Entrance side control device
- 10 --- Leaving side control device
- 12 --- Individual confirmation device

[Translation done.]

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[Drawing_1]



```

graph TD
    subgraph Left_Column [ ]
        direction TB
        L1[入退室管理  
システムへの入力]
        L2[Aさん入室]
        L3[Aさん退室]
        L4[不正ログイン  
発生警報]
        L5[ ]
    end

    subgraph Middle_Column [ ]
        direction TB
        M1[Aさん入室状態]
        M2[Aさんログイン]
        M3[Aさんログアウト]
        M4[Aさん(のログ名で)ログイン]
        M5[ ]
    end

    subgraph Right_Column [ ]
        direction TB
        R1[ログイン管理システム内の  
プロセスの動き]
        R2[ログイン待ち]
        R3{正常入室済?}
        R4[通常のログイン処理]
        R5[通常のログアウト処理]
        R6{正常入室済?}
        R7[不正ログイン通知処理]
        R8[ログイン待ち]
    end

    L1 -.-> M1
    L2 -.-> M1
    L3 -.-> M1
    L3 -.-> M4
    L4 -.-> M5
    L5 -.-> M1

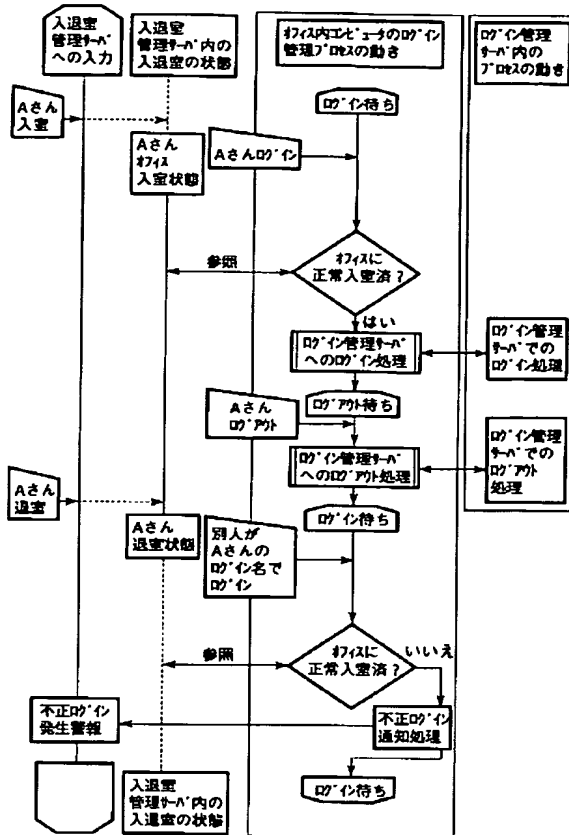
    M1 -.-> R1
    M2 -.-> R2
    M3 -.-> R5
    M4 -.-> R6
    M5 -.-> M1

    R2 --> R3
    R3 -- はい --> R4
    R3 -- いいえ --> R6
    R4 --> M2
    R5 --> M3
    R6 -- はい --> R7
    R6 -- いいえ --> R8
    R7 --> L4
    R8 --> R2

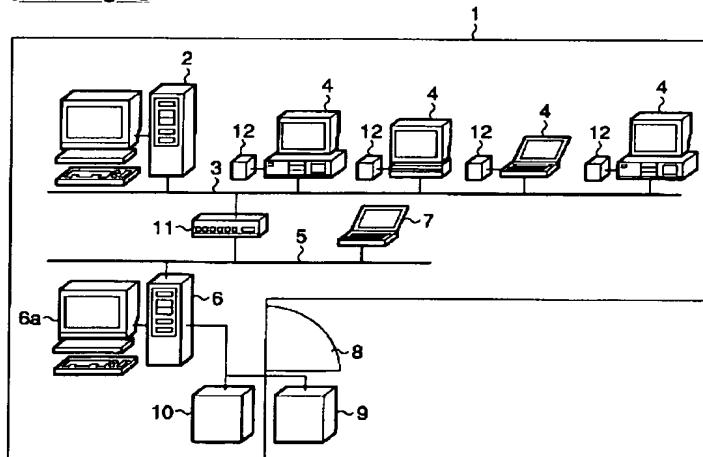
    M2 -- 参照 --> M1
    M3 -- 参照 --> M1
    M4 -- 参照 --> M1

```

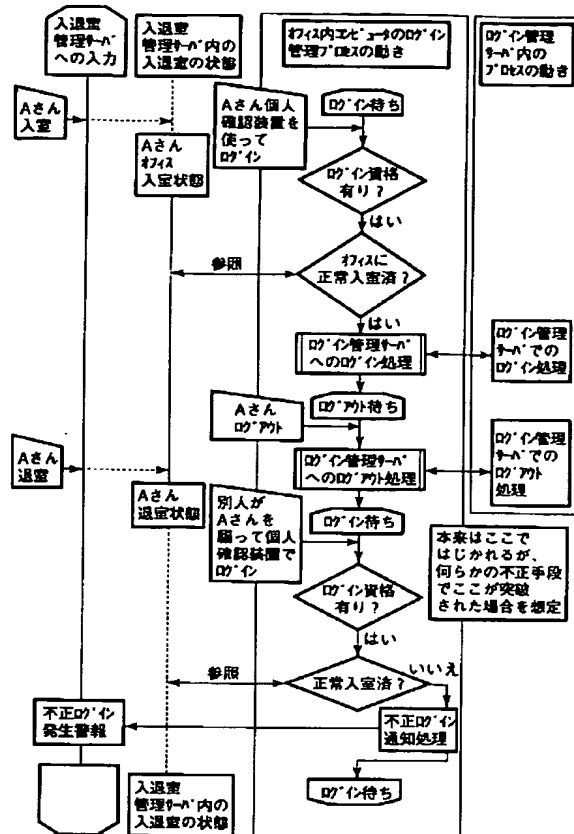
[Drawing 2]



[Drawing_4]



[Drawing 5]



[Translation done.]